

Notice of Allowability

Application No.

09/607,421

Examiner

Samuel Broda

Applicant(s)

TETZLAFF, THOMAS A.

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's Amendment & Response mailed on 2 March 2005.
2. ☒ The allowed claim(s) is/are 1-6, 16-20 and 26-34.
3. ☒ The drawings filed on 9 August 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


SAMUEL BRODA, ESQ.
PRIMARY EXAMINER

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1. This communication is in response to Applicant's Amendment & Response Under 37 C.F.R. 1.116 (the "Amendment") mailed on 2 March 2005 as part of a Request for Continued Examination. In the Amendment, claims 1 and 16 were amended; claims 21-25 were canceled; claims 26-34 were added. Claims 1-6, 16-20, and 26-34 are pending.

Reasons for Allowance

2. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

The closest prior art of record shows:

(1) the combination of the "Magic" VLSI layout editor with the "Esim" switch-level simulator that conditionally treats unknown node input states as known values when initializing the simulation and evaluates the resulting output nodes by using the "known" input states, including by setting one or more input nodes as a "0" (Smith, "Set-and-See Switch-Level Simulation for VLSI Functional Verification");

(2) an RTL logic simulation using random two-state initialization to eliminate X-states (Bening, "A Two-State Methodology for RTL Logic Simulation"); and

(3) using an internal simulator function to randomly coerce uninitialized "X" values into logic 0s and logic 1s (Maxfield, "'Xs' in Digital Simulation: Beware, Here be Dragons").

2.1 Applicant's first set of claims consists of claims 1-6, 16-20, and 26-28.

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Independent claim 1 is directed to a computer-implemented method of initializing a simulation; independent claim 16 is directed to the corresponding computer program product. Each independent claim identifies the distinct limitations of: “accessing an attribute of the device model within a simulation of a self-resetting circuit” and “responsive to the state of the attribute, conditionally treating an X on an input node of the device model as a value other than an X.”

Because the closest prior art does not appear to teach or suggest the treatment of an unknown input node as a known value as part of a simulation of a self-resetting circuit, claims 1-6, 16-20, and 26-28 are deemed allowable.

2.2 Applicant's second set of claims consists of claims 29-34.

Independent claim 29 is directed to a computer-implemented method of initializing a simulation. This claim identifies the distinct limitations of: “accessing a first attribute on a simulation model within a simulation of a self-resetting circuit” and “responsive to the first attribute, conditionally treating an unknown state of a first input node on the simulation model as a known state.”

Because the closest prior art does not appear to teach or suggest the treatment of an unknown input node as a known value as part of a simulation of a self-resetting circuit, claims 29-34 are deemed allowable.

3. Any comments considered necessary by Applicants must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Samuel Broda, whose telephone number is (571) 272-3709. The Examiner can normally be reached on Mondays through Fridays from 8:00 AM – 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kevin Teska can be reached at (571) 272-3716. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist, whose telephone number is (571) 272-2100.



**SAMUEL BRODA, ESQ.
PRIMARY EXAMINER**